

Amendments to the Specification:

• Please replace the paragraph beginning at page 7, line 6, with the following redlined paragraph:

The network structure includes the  $m$  number of connection nodes (where  $m$  is a positive integer) 21 to which unique user wavelengths are respectively allocated, a single main ring controller 22 for controlling the flow of a packet transmitted between two connection nodes, and a main ring 23 for connecting the  $n-m$  number of connection nodes 21 and the single main ring controller 22 in a ring shape and along which wavelength division multiplexed signals can be transmitted, wherein the connection nodes 21 is connected to the sub-ring 26-25 via the sub-ring controller 24. Of course,  $n$  number of terminals may be connected to the sub-ring 26-25.

• Please replace the paragraph beginning at page 7, line 22, with the following redlined paragraph:

That is,  $m$  number of sub-rings is connected to this main ring, and  $m-n$  number of terminals is connected to respective sub-rings. In an IPOW network of a two-layer ring structure having these main ring/sub-rings,  $m \times n$  number of terminals is connected. The main ring and the sub-ring are connected via a sub-ring controller. The sub-ring controller is a connection point of the main ring and the sub-ring and is also responsible for relaying transmission/reception of a packet between the terminals and the main ring. The main ring controller is a control node for switching/transmitting inter-sub-ring packets between the terminals connected to other sub-rings.

• Please replace the paragraph beginning at page 8, line 15, with the following redlined paragraph:

This sub-ring includes the  $n$  number of terminals 41-(where  $n$  is a positive integer) to which unique user wavelengths are respectively allocated, a single sub-ring controller 42-for controlling the flow of a packet transmitted between two terminals, and a sub-ring 43-for connecting the  $n$  number of terminals 41-and the single sub-ring controller 42-in a ring shape and along which wavelength division multiplexed signals can be transmitted. To respective terminals may be connected end users or a group of users. If the end user is connected, an

optical network interface card is mounted. If the group users are connected, an optical network interface unit is mounted.

*• Please replace the paragraph beginning at page 8, line 23, with the following redlined paragraph:*

*a4* Wavelength couplers, connected to the respective terminals, adds/drops only its own unique user wavelength signal among wavelength division multiplexed signals that are transmitted via the sub-ring-13. The sub-ring controller 12-drops all the wavelength division multiplexed signals transmitted via the sub-ring 13-to de-multiplex them. Then, it loads respective signals on their unique user wavelengths allocated to their destination terminals, multiplexes again the signals and then adds the multiplexed signal to the sub-ring-13.

*• Please replace the paragraph beginning at page 10, line 5, with the following redlined paragraph:*

*a5* In case of the communication of each of the sub-ring controller connected to one main ring controller, each of the sub-ring controllers uses only the wavelength pre-allocated to itself to transmit/receive optical signal. Also, ~~each of the sub-ring controllers main ring controller~~ transmits an optical signal only in one direction, for example, only in a clockwise direction or an ant-clockwise direction, so that wavelength collision does not occur within the main ring.

*• Please replace the paragraph beginning at page 19, line 21, with the following redlined paragraph:*

*a6* Fig.-2\_9 shows that two sub-rings are horizontally connected to each other, but other sub rings may be connected thereto via other terminals.

*• Please replace the paragraph beginning at page 19, line 23, with the following redlined paragraph:*

*a7* Fig.-3\_8 is one embodiment for illustrating a network structure in which sub-rings are vertically extended.